

AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented): An amplifier for converting a charge signal, comprising:

a signal converting circuit for converting a charge signal from a sensor by an effect of a detecting target and by a converted signal into a voltage signal; and

an automatic correction circuit including an amplifier circuit for detecting a leakage of the charges generated in a signal transmission system by an output level of the signal converting circuit, and including a switch which is actuated by an output of the amplifier circuit, the switch being conducted by an output of the amplifier circuit when the leakage of the charges is detected by the amplifier circuit to discharge an input charge of the signal converting circuit, thereby automatically correcting an output level of said signal converting circuit so that the output levels are the same at the start timing and the end timing for generating the charges of said sensor.

Claim 2 (Original): The amplifier for converting a charge signal according to Claim 1, further comprising:

a reset circuit for discharging an input charge by an external signal.

Claim 3 (Original): The amplifier for converting a charge signal according to Claim 2, wherein:

the sensor is a cylinder pressure sensor for detecting a combustion pressure in an engine cylinder.

Claim 4 (Original): The amplifier for converting a charge signal according to Claim 3, wherein:

the external signal is synchronous with a rotational angle of a crankshaft of the engine and the input charge of said signal converting circuit is discharged at each predetermined combustion cycle.